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FIVE-YEAR REVIEW REPORT

Second Five-Year Review Report

for

Johns-Manville Site

Waukegan

Lake County, Illinois

May 2003

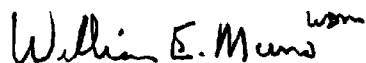
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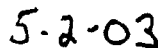
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Approved by:

Date:

Handwritten signature of William E. Munro, with the initials "wem" written above the name.

William E. Munro, Director
Superfund Division

Handwritten date 5-2-03.

Five-Year Review Report

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**List of Acronyms
(In Order of Appearance)**

<u>NAME OR TERM</u>	<u>ACRONYM</u>
United States	U.S.
Environmental Protection Agency	EPA
Comprehensive Environmental Response, Compensation and Liability Act (Superfund)	CERCLA
National Contingency Plan	NCP
Code of Federal Regulations	CFR
Record of Decision	ROD
National Priorities List	NPL
Explanation of Significant Differences	ESD
Maximum Contaminant Level	MCL
Operation and Maintenance	O&M
Remedial Design/Remedial Action	RD/RA
National Emission Standards for Hazardous Air Pollutants	NESHAPs

Executive Summary

This report documents the Second Five-Year Review for the Johns-Manville Site in Waukegan, Illinois (the Site). In 2001, Levine-Fricke, a consultant for Johns Manville, collected air, ground water, and surface water samples at the Site in accordance with the approved Operation and Maintenance Plan for the Site. On June 7, 2002, Levine-Fricke submitted the "Second Five-Year Post-Remedial Construction Ambient Air, Groundwater, and Surface Water Monitoring Report" for the Site to the United States (U.S.) Environmental Protection Agency (EPA). The EPA approved this report on December 10, 2002. This report utilizes the data in the Levine-Fricke Report and provides an analysis of the protectiveness of the remedy implemented at the Site. The findings indicate that the Johns Manville Site remedy continues to be protective of human health and the environment. The next Five-Year Report is due in May 2008.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Johns-Manville		
EPA ID (from WasteLAN): ILD00544354		
Region: 5	State: IL	City/County: Waukegan/Lake
SITE STATUS		
NPL Status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify) _____		
Remediation Status (choose all that apply): <input checked="" type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs?* <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Construction completion date: 08/21/91 (PCOR 12/31/91)	
Has site been into reuse? <input type="checkbox"/> YES <input checked="" type="checkbox"/> No (Pending)		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency _____		
Author name: Brad Bradley		
Author title: Remedial Project Manager	Author affiliation: U.S. EPA Region 5	
Review period: 10/15/2000 to 03/31/2003		
Date(s) of site inspection: 08/28/2002 and 02/18/03		
Type of review: <div><input checked="" type="checkbox"/> Post -SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion</div>		

Review number: <input type="checkbox"/> 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)
Triggering action: <input type="checkbox"/> Actual RA Onsite Construction at OU # ____ <input type="checkbox"/> Actual RA Start at OU# ____ <input type="checkbox"/> Construction Completion (PCOR) <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify) _____
Triggering action date: (from WasteLAN): 01/21/1999
Due date (five years after triggering action date): 01/21/2004

* ["OU" refers to operable unit.]

Issues:

There are no current contamination issues. Property use changes have precipitated the need to perform further remedial actions. The facility ceased operation in 1998 and facility buildings were demolished in 2001. This resulted in the shutting down of the waste water treatment system at the site. The former waste water treatment system must now be closed. This issue does not directly affect this five-year review but is an issue that must be addressed under a second Explanation of Significant Differences that was signed in September 2000.

Recommendations and Follow-up Actions:

EPA, Johns Manville, and the State of Illinois are currently negotiating a Consent Decree to address the closure of the waste water treatment system. Milestones for completion of cleanup tasks will be established once the Consent Decree is lodged/entered.

Prior to the next (third) five-year review, EPA and Johns Manville will update the sampling extraction and preparation techniques for metals in ground water. The current sampling techniques, which were established over 10 years ago, are outdated.

Protectiveness Statement(s):

The remedy at the Johns-Manville Site currently protects human health and the environment because the final remedy has been implemented for most of the Site. Some of the ponds in the former wastewater treatment system have not yet been provided with a final, long-term remedy (See Figure 1). The short term remedy for these ponds, to maintain the water level in the ponds such that no asbestos fibers will become exposed to the air, has been protective in the interim. Since the manufacturing facility has been shut down and the buildings demolished, the ponds must now receive final closure with an appropriate soil cover/cap. In September 2000, EPA issued a Second ESD for the Site to provide for such closure. EPA is currently negotiating modifications the RD/RA Consent Decree with Johns Manville and the State of Illinois to provide for final closure of these ponds. The remedy for the ponds is expected to be protective of human health and the environment upon completion.

Other Comments: None.

Five-Year Review Report

I. Introduction

The Johns-Manville Site in Waukegan, Illinois (the Site) is a former asbestos manufacturing facility. The landfill and portions of the wastewater treatment system were cleaned up by Johns Manville from November 1988 through August 1991 pursuant to a June 30, 1987 Record of Decision issued by the United States Environmental Protection Agency (EPA).

Johns Manville conducted a first Five-Year Review in 1996-1997, under EPA oversight. EPA concurred with the first Five-Year Review Report on January 21, 1999. Johns Manville conducted sampling and prepared a "Second Five-Year Post-Remedial Construction Ambient Air, Groundwater, and Surface Water Monitoring Report" in June 2002 (the Monitoring Report), which was approved by EPA on December 10, 2002. The Monitoring Report is included in this Second Five-Year Review Report as Appendix 1. The Monitoring Report provides much of the information used to prepare the Second Five-Year Review Report and is frequently referenced to avoid duplication of effort.

The Purpose of the Review

The purpose of five-year reviews is to determine whether the remedy at a site continues to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

Authority for Conducting the Five-Year Review

EPA is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section 104 or 106, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for the unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

Who Conducted the Five-Year Review

Johns Manville, through its contractor, Levine-Fricke, conducted all of the sampling that was required for the five-year review. Representatives of Levine-Fricke performed an inspection of the Site, and EPA Remedial Project Manager routinely visits the site and monitors the integrity of the cover systems at the Site. EPA completed the review based on this information.

Other Review Characteristics

This is the second five-year review for the Johns-Manville Site. The triggering action for this review is the completion of the First Review in January 1999. This review is being conducted because the capping remedy at the site allowed hazardous substances to be left on site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

The site chronology is tabularized below:

<u>Event</u>	<u>Date</u>
National Priorities List Listing	12/30/82
Remedial Investigation/Feasibility Study complete	6/30/87
Record of Decision signature	6/30/87
Explanations of Significant Differences	2/9/93 and 9/22/00
Remedial Design/Remedial Action Consent Decree Entry	3/18/88
Remedial Design start	5/18/88
Remedial Design complete	10/17/88
Remedial Action start	10/21/88

Remedial Action complete	12/31/91
First Five- Year review	1/21/99

III. Background

Physical Characteristics

The Johns-Manville Site in Waukegan, Illinois is a former asbestos manufacturing facility that operated from 1928 through 1998. Asbestos was used in products manufactured at the facility until approximately 1985, when fiberglass was substituted for asbestos. The Johns Manville property is 300 acres and included the manufacturing buildings (demolished in 2001), parking areas, and an approximately 150-acre disposal area (see Figure 1).

Land and Resource Use

The Site is bounded by Lake Michigan to the east, the Illinois Beach State Park to the north, a Union Pacific rail corridor to the west and a power generating station to the south. The nearest residences are approximately ½ mile west of the Site.

History of Contamination

The facility's wastewater treatment system operated on top of the 150-acre landfill area. Approximately 3,000,000 cubic yards of off-specification products, primarily containing asbestos, and asbestos-containing sludge dredged from the wastewater treatment system were ultimately disposed in the landfill area. Other contaminants, including lead, chrome, thiram, and xylene were also disposed in the landfill area, but the primary contaminant of concern was asbestos. The asbestos-containing sludge at the Site was located at the landfill surface in many areas and could easily become airborne.

Initial Response

EPA did not perform any removal actions or initial remedial measures at the site.

Basis for Taking Action

The primary exposure pathway identified during the Remedial Investigation/Feasibility Study for the site was inhalation of asbestos by trespassers or nearby residents. This was exacerbated by the fact that the asbestos-containing sludge was friable and high winds were frequent due to the effects of Lake Michigan. Ground water and surface water were impacted by asbestos fibers but no contaminants were migrating off-site at levels that exceeded applicable standards.

IV. Remedial Actions

Remedy Selection

The Remedial Action selected for the Site in the June 30, 1987 Record of Decision (ROD) was basically soil cover with vegetation. The soil cover, which was placed over all dry waste disposal areas of the Site, consisted of 6 inches of sand overlain by 15 inches of clay and 3 inches of topsoil. The cover was modified slightly, to 26 inches of clay, on slopes greater than 20 percent. A nominal 12-inch layer of rip rap, with 4 inches of bedding material, was applied around the perimeter of the ponds in the waste water treatment system. Site roadways were provided with a 24-inch cover consisting of sand overlain by gravel. The area of the Site that was provided with soil cover consisted of 120 acres. The east side of the Site was fenced (the rest of the Site perimeter was already fenced), and additional warning signs were placed around the perimeter fence.

Remedy Implementation

A consent decree between the United States, Johns Manville and the State of Illinois was entered on March 18, 1988 to carry out the selected remedy. Remedial construction began in October 1988.

During construction, approximately 30 additional acres of the Site were discovered to have asbestos-containing materials at or near the surface. With two exceptions, these additional areas were covered with 24 inches of soil, with vegetation. Two parking lot areas were covered with 6 inches of gravel and a minimum of 2 inches of bituminous material. Remedial construction was physically completed in August 1991. Final inspections were conducted shortly thereafter, and a Preliminary Close-out Report for the Site was signed on December 31, 1991.

Another part of the remedial action for the Site was air, ground water, and surface water monitoring. The Monitoring Report contains a summary of these monitoring activities, as well as the results of the round of monitoring conducted in conjunction with the second five year review. Given that the monitoring programs will continue for a minimum of 30 years, the Johns Manville Site will not be deleted from the National Priorities List (NPL) for a number of years.

Since the remedial action was completed at the Site, two Explanations of Significant Differences (ESDs) have been executed. The first ESD, signed on February 9, 1993, addressed several differences between the way the remedial action was conducted and the language in the 1987 ROD. Several changes were made in the composition of the soil cover to accommodate actual site conditions. For example, the 1987 ROD did not contain any provisions for cleaning up parking lot areas. During the remedial action, two parking lot areas with asbestos-containing material (ACM) at or near the ground surface were discovered. These areas were remediated by placing a six inch gravel sub-base and then a minimum two-inch bituminous layer. The first ESD documented such differences. The first ESD also required that deed restrictions be placed on the Superfund portion of the Johns Manville property to limit any disturbance of the soil cover

at the Site. The Second ESD was executed on September 22, 2000, and required closure of the on-site waste water treatment system and landfill areas that continued to operate after the remedial action was complete. The Johns Manville manufacturing facility was shut down in 1998, and thus, the wastewater treatment system and existing landfill areas (which continued to operate and receive fiberglass-based wastes) were no longer needed. The Second ESD outlined the required closure activities for these portions of the Site. These activities are still pending.

EPA, Johns Manville, and the State of Illinois are currently in the process of amending the 1988 Consent Decree to address the two Explanations of Significant Differences to the 1987 ROD and to add in restrictive covenants on the Superfund portions of the Johns Manville property.

V. Progress Since the Last Review

During the first five year review, one issue was identified. The asbestos concentration in one monitoring well in the southeast corner of the landfill area (Well 10A) contained asbestos concentrations that exceeded the Maximum Contaminant Level (MCL) for asbestos established under the Safe Drinking Water Act. This monitoring well was drilled very close to the toe of the landfill area and may have been impacted by waste materials that were encountered during the process of installing the well. The well was resampled, and the results of this second sampling did not exceed the MCL for asbestos. To resolve this issue on a more permanent basis, EPA directed Johns Manville to install an additional well between Well 10A and Lake Michigan to determine if unacceptable levels of asbestos are migrating into the lake. This new well, monitoring well W, was sampled in November 1998. Results indicate that the asbestos levels in well W are significantly below the asbestos MCL.

VI. Five-Year Review Process

Administrative Components

The sampling activities, which are required pursuant to the Operation and Maintenance Plan for the Site, that were performed during the five-year review process are detailed in the attached Monitoring Report.

Community Involvement /Interviews

EPA conducted two public availability sessions on December 3, 2002. One concern was raised by an attendee, that EPA should sample soil and sediment in the Illinois Beach State Park and conduct a full-scan analysis of the samples. As a result of this comment, EPA will pursue sampling of soil and sediment in the Illinois Beach State Park and analysis of these samples for asbestos. There is no indication in any ground water data collected during the remedial action and the first and second five-year reviews that any other contaminants are migrating off-site.

migrating off-site. This sampling will not affect the conclusions of the second five-year review but rather will be pursued as a separate issue that is being undertaken in response to a public comment but not as a result of any perceived data gap at the Site.

Document and Data Review

The list of documents and data reviewed in preparing for this Five-Year Review Report is listed in the attachment entitled "List of Documents Reviewed".

Site Inspection

The Johns-Manville Site is physically inspected twice per year in accordance with the Operation and Maintenance manual for the Site. The results of these inspections are included in the Monitoring Report. The EPA inspected the site twice in conjunction with the five-year review: August 28, 2002 and February 18, 2003. Both inspections involved observations of the physical condition of the Site, which was acceptable on both occasions.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

Remedial Action Performance

The primary exposure pathway at the Site was inhalation of airborne asbestos fibers by on-site workers or trespassers. As indicated by the air monitoring data in the Monitoring Report, the remedy has been extremely effective in addressing this exposure pathway. The vegetated soil cover is inspected twice annually and continues to provide an effective barrier to airborne asbestos fibers. The ground water was not considered to be a complete exposure pathway because there is no extraction of ground water downgradient from the Site. The ROD required monitoring of ground water and surface water (i.e. lake Michigan) and the development of a contingency plan if constituents exceeded applicable drinking water standards. During the second five-year review, only one constituent exceeded the applicable drinking water standard, bis (2-Ethylhexyl) phthalate. This exceedance occurred in one of the site background wells and is thus not attributable to site contamination.

In summary, the data gathered during the second five-year review indicate that the remedy continues to function as designed, is performing as expected, and that the containment of contaminants is effective.

System Operation and Maintenance

The remedy for the Site does not include any operating systems; other than data collection for five-year reviews, the Operation and Maintenance (O&M) for the Site consists of twice annual

site inspections to assess the integrity of the soil cover and make repairs, as needed. These inspections have been and will continue to be an effective means to ensure the cover integrity. There have been no significant problems observed during any of the recent cover inspections.

Opportunities for Optimization

Since there are no operating systems at the Site, there are limited opportunities for optimization of O&M. Prior to each five-year review, EPA and/or Johns Manville identify any sampling constituents that may be eliminated from the list of analytes. EPA has allowed several constituents to be eliminated in this manner, and this does optimize the monitoring program at the Site. For the second five-year review, EPA dropped the requirement to analyze air samples for lead and chromium since neither of these contaminants was ever detected in previous rounds of air sampling, including sampling that was conducted prior to the completion of the remedial action at the Site.

Early Indicators of Potential Issues

Since there are no operating systems at the Site, the only early indicators of potential issues would be upward trends in ground water contaminant data. The trend for all contaminants has been downward or stable for all contaminants at the Site since the first five-year review. There is some significant work pending at the Site: the closure of all of the former wastewater treatment system ponds. EPA will monitor these activities in the future, but this will be relevant to the next five-year review.

Implementation of Institutional Controls and Other Measures

Access controls, in the form of fencing and warning signs, are in place at the Site. These controls, along with the continued presence of Johns Manville employees at the site, are effective measures to limit access to the Site. EPA is currently negotiating amendments to the Remedial Design/Remedial Action (RD/RA) Consent Decree (the Decree) with Johns Manville and the State of Illinois. One of the amendments to the Decree is the addition of restrictive covenants to limit activities on the Superfund portion of the Johns Manville property. So even though there are currently no deed restrictions on the Site, such measures are being developed and will in place in the near future.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy still valid?

Changes in Standards and To Be Considered Criteria

Only one standard relevant to the remedy at the Site has changed since the last five-year review, the newly promulgated Illinois regulations that apply to landfills. The new standard for landfill cap thickness is 3 feet for non-putrescible wastes and 6 feet for putrescible wastes. These

standards are based on the prevention of infiltration of precipitation and generation of leachate at typical solid waste landfills. The remedy for the Site was developed primarily to prevent asbestos-containing waste materials from becoming airborne, and the cover thickness still comports with the applicable regulations for asbestos manufacturing facilities, the National Emission Standards for Hazardous Air Pollutants (NESHAPS), which require a 24-inch soil cover over asbestos manufacturing wastes. Additionally, the cover at the Site was designed to significantly retard the up-migration of stone-sized pieces of ACM due to freeze/thaw effects. The soil cover, with vegetation, at the Site is still adequately performing its desired function, as demonstrated by the analytical results from the second five-year review. With respect to migration of contaminants through the ground water, the analytical results demonstrate that there is no constituent migrating from the site in excess of any applicable standard. Therefore, the soil cover system installed at the Site continues to be protective of human health and the environment.

Changes in Exposure Pathways

There have been no changes in the potential exposure pathways at the Site since the implementation of the remedy for the Site. There have been no land use changes at the Site nor are any expected in the near future. There is a proposed development of a sports complex on property adjacent to the Site; however, this change in use will not be impacted by the Site because the airborne emissions from the Site have been eliminated and the proposed sports complex is up-gradient from the Site.

Changes in Toxicity and Other Contaminant Characteristics

Neither the toxicity factors for the contaminants of concern nor other contaminant characteristics have changed in a way that could affect the protectiveness of the remedy. The primary contaminants of concern for the site (asbestos and metals) are basically inert.

Changes in Risk Assessment Methods

Standardized risk assessment methods have not changed in a way that could affect the protectiveness of the remedy.

Expected Progress Toward Meeting Remedial Action Objectives

The remedy for the Site is progressing as expected. Remedial Action Objectives have been met at the Site, and the monitoring programs will continue to ensure that any changes in contaminant levels will be detected and addressed, if necessary.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There have been no newly identified ecological risks, impacts from natural disasters, or any other information that has been identified that could affect the protectiveness of the remedy for the Site.

VIII. Issues

Several issues have arisen since the first five-year review, none of which currently prevent the remedy from being protective.

First, in 1998, the Johns Manville facility shut down. This eliminated the need for the wastewater treatment system that is co-located with the landfill areas of the Site. In September 2000, EPA issued a second ESD which required closure of these ponds. EPA, Johns Manville, and the State of Illinois are currently working on these closure issues; however, Johns Manville has continued to pump water into the system to prevent the ponds from drying out and possibly releasing asbestos fibers to the air. Given this commitment on the part of Johns Manville, the pond closure issues are not relevant to the second five-year review and do not currently prevent the remedy from being protective.

Second, the Johns Manville manufacturing buildings were demolished and removed from the Johns Manville property in 2000-2001. During demolition activities, water that was used to control potential asbestos air emissions was routed to the wastewater treatment system ponds. This introduced additional asbestos fibers into the system; however, since the ponds continue to be filled with water, this does not create any protectiveness issues at the Site.

Last, the former manufacturing building area is slated for redevelopment into a sports complex. This project will not be completed for several years and is, thus, not relevant to the second five-year review. However, this project will be monitored by EPA because it will introduce more potential receptors into an area that is adjacent to the Site.

IX. Recommendations and Follow-up Actions

There are two current issues which will result in an improvement in the remedy and the representativeness of the ground water monitoring, respectively.

The first is the closure of the wastewater treatment system ponds and the formerly active landfill areas on the Site (see Figure 1). At the time of the signing of the ROD and the first five-year review for the Site, the Johns Manville manufacturing facility was still in operation and wastes were still entering the landfill area via the wastewater treatment system and as solid wastes that were disposed in two active landfill areas on-site. The facility was closed in 1998 and the buildings were demolished in 2000 and 2001. There is now a need for closure of the former wastewater treatment system ponds and landfill areas.

On September 22, 2000, EPA issued a Second ESD to address these outstanding cleanup issues. EPA, the State of Illinois, and Johns Manville are currently negotiating modifications to the 1988 Consent Decree to include provisions for closure of the ponds and landfill areas. The anticipated completion date for the negotiations is May 2003. The Consent Decree will then be lodged and entered, and Remedial Design work will begin for closure of the ponds and landfill areas. Although the site remedy continues to be protective, final closure is needed for the wastewater treatment ponds because the water cover that currently provides a barrier to airborne releases of asbestos fibers in the ponds is not a permanent remedy, and the soil cover over the landfill areas that were still active after the original remedy was completed is not sufficient as a final, permanent cover. Implementation of the measures required in the Consent Decree modifications will put into place a final remedy for these areas of the Site. These are the only remaining areas of the Site that have not yet been provided with a final remedy/closure, so it is anticipated that there will not be a need for any further modifications to the Consent Decree for the Site.

Second, the method for sample extraction and preparation specified in the 1992 Second Draft Operation and Maintenance Plan (O&M Plan) for metals samples in ground water is outdated. The current recommended method for extraction and preparation of metals samples for ground water is to collect unfiltered samples with low-flow extraction techniques. The method currently required in the O&M Plan is not consistent with this approach and should be changed. Although currently-accepted methods for extraction and preparation of metals samples will increase the quality and representativeness of the ground water monitoring program at the Site, Johns Manville will provide the updated O&M Plan to EPA for review prior to the commencement of data collection for the third five-year review for the Site.

X. Protectiveness Statement

The remedy at the Johns-Manville Site currently protects human health and the environment because the final remedy has been implemented for most of the Site. Some of the ponds in the former wastewater treatment system and two formerly active solid waste landfill areas have not yet been provided with a final, long-term remedy (See Figure 1). The short-term remedy for these ponds, to maintain the water level in the ponds such that no asbestos fibers will become exposed to the air, has been protective in the interim. Since the manufacturing facility has been shut down and the buildings demolished, the ponds and landfill areas must now receive final closure with an appropriate soil cover/cap. In September 2000, EPA issued a Second ESD for the Site to provide for such closure. EPA is currently negotiating modifications the RD/RA Consent Decree with Johns Manville and the State of Illinois to provide for final closure of these ponds and landfill areas. The remedy is expected to be protective of human health and the environment upon completion.

XI. Next Review

The sampling activities for the next five-year review for the Johns-Manville Site will be

performed in year 2008, with the Third Five-Year Review Report due five years from the date of signature of this Second Five-Year Review Report.

Attachments

Figure 1- Site Map
List of Documents Reviewed

Appendices

Appendix 1- June 7, 2002 "Second Five-Year Post-Remedial Construction Ambient Air, Groundwater, and Surface Water Monitoring Report" for the Johns-Manville Superfund Site in Waukegan, Illinois

Appendix 2- Comments Received from the State Agency

LIST OF DOCUMENTS REVIEWED
(In Chronological Order)

- 1. Record of Decision for the Johns-Manville Site in Waukegan, Illinois-June 30, 1987 (EPA)**
- 2. Five-Year Review Report for Johns Manville Disposal Area-Waukegan, Illinois-November 18, 1997 (CC Johnson & Malhotra)**
- 3. Explanation of Significant Differences- September 22, 2000 (EPA)**
- 4. Comprehensive Five-Year Review Guidance- June 2001 (EPA)**
- 5. Second Five-Year Post-Remedial Construction Ambient Air, Groundwater, and Surface Water Monitoring Report- June 7, 2002 (Levine-Fricke)**

Figure 1
Johns-Manville Property

